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Concise report on world population monitoring, 1998: health and mortality

Report of the Secretary-General

Summary

The present report has been prepared in accordance with the terms of reference of the Commission on Population and Development and its topic-oriented prioritized multi-year work programme, which was endorsed by the Economic and Social Council in its resolution 1995/55.

The report provides a summary of recent information on selected aspects of health and mortality and covers such topics as levels and trends of mortality; child survival and health; primary health care and the health-care sector; women's health and safe motherhood; human immunodeficiency virus and acquired immunodeficiency syndrome (HIV/AIDS); the epidemiological transition; health and mortality policies; activities of intergovernmental and non-governmental organizations with respect to health and mortality; and health and development. The preliminary, unedited version of the full report is available as a working paper in document ESA/P/WP.142.

The report was prepared by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat with contributions from the World Health Organization, the United Nations Children's Fund and the Joint and Co-sponsored United Nations Programme on HIV/AIDS.

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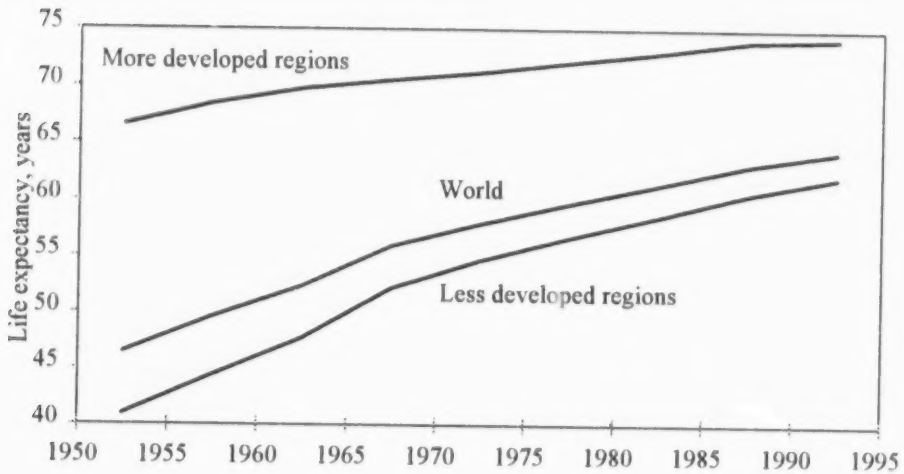
I. Levels and trends of mortality

1. Since the Second World War, remarkable progress has been achieved in the reduction of mortality with the result that today the global average life expectancy is approximately 62 years for males and 67 years for females, a level typical for the more developed regions in the early 1950s. Mortality decrease has been truly global, but life expectancy has risen more rapidly in the less developed regions than in the more developed regions, so that the gap between the two narrowed from 25.6 years in the early 1950s to 12.1 years in 1990-1995 (figure I). Today, their life expectancies are 62.1 years and 74.2 years, respectively.

2. In most developed countries, reductions of mortality in adult ages, and especially in advanced ages, have made a major contribution to rising life expectancies. Southern Europe achieved the fastest mortality decline, recording a gain of 12.7 years in four decades. Mortality continues to decline even at very high levels of life expectancy. For instance, between 1990 and 1995, Japan's life expectancy, the highest in the world, increased from 75.9 to 76.4 years for males and from 81.8 to 82.9 years for females.

3. Mortality trends have been different, however, in countries with economies in transition. From the post-Second World War period to the mid-1960s, life expectancy in the former Union of Soviet Socialist Republics (USSR) and most Eastern European countries was rising steadily, essentially because infant mortality was falling rapidly from high levels. By the mid-1960s, life expectancy in Eastern Europe had approached levels in Northern America and Western Europe. Life expectancy then stagnated for two to three decades, interrupted by short-lived rises and reversals. The stagnation was the result of two opposing trends: slowly improving child survival and deteriorating survival of adults, especially males. As a result, the average life expectancy (both sexes combined) in Eastern Europe varied in 1990-1995 from 66.5 years in the Russian Federation to 72.0 years in the Czech Republic, whereas in the European Union it ranged from 74.4 years in Portugal to 78.1 years in Sweden. The situation is worse in the European group of the new independent States formed following the dissolution of the Soviet Union. Within a time period of five to eight years, life expectancy has deteriorated in each country of this group with the decreases (for both sexes combined) ranging from 2.7 years in Estonia to 5.9 years in the Russian Federation.

Figure I. Life expectancy at birth, world, more developed regions and less developed regions, 1950-1995, both sexes combined



Source: World Population Prospects: The 1996 Revision (United Nations publication, forthcoming).

4. Progress in the less developed regions has been uneven and current levels of life expectancy vary widely. Asia achieved the largest absolute gain in life expectancy between 1950-1955 and 1990-1995, from 41.3 to 64.5 years. Gains exceeding 20 years were achieved by the most populous Asian nations: China, India, Indonesia, Pakistan, the Philippines, Thailand and Turkey. However, some Asian countries still have some of the lowest expectations of life in the world, one example being Afghanistan (43.5 years in 1990-1995). In Latin America and the Caribbean, life expectancy increased less rapidly than in Asia (17.1 years), reaching 68.5 years in 1990-1995. Africa lagged further behind, with a 14-year increase from 37.8 years in 1950-1955 to 51.8 years in 1990-1995.

5. Although the least developed countries, most of which are in sub-Saharan Africa, achieved an increase in life expectancy of 14.2 years, progress has been much slower than in the other developing countries. The fact that the average annual increment in life expectancy from 1950-1955 to 1990-1995 was 0.4 year in the least developed countries as compared with 0.6 year in the less developed regions (with the least developed countries excluded) means that the least developed countries have fallen further behind the rest of the world. While in 1950-1955 the average life expectancy in the group of the least developed countries (35.5 years) had been 6.2 years lower than the average for the less developed regions with that group excluded, by 1990-1995 the gap had widened to 14.6 years. Since 1985, wars and civil strife have caused major mortality increases in some countries. For instance, life expectancy in Rwanda is estimated to have dropped from 46.7 years in 1985-1990 to 22.6 years in 1990-1995.

6. The spread of the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) epidemic constitutes an important cause of death in many developing countries. The impact of HIV/AIDS is particularly devastating in sub-Saharan Africa, where the widespread transmission of the virus began in the late 1970s to early 1980s. The stagnation or decline in life expectancy caused by AIDS is projected to continue through the year 2000. Without AIDS, the aggregate life expectancy of the 24 sub-Saharan African countries most affected by the epidemic would have been 51.4 years in 1985-1990 and would have increased to 52.6 years in 1990-1995. Because of AIDS, the actual life expectancy was 1.5 years lower in 1985-1990 and further decreased to 48.3 years in 1990-1995, 4.3 years lower than in the absence of AIDS. In the five hardest-hit African countries, where the prevalence of HIV is 10 per cent or higher among the adult population, 9.1 years of life expectancy were lost because of AIDS in 1990-1995; the average life expectancy in those countries decreased to 44 years; the toll taken by the epidemic in these countries alone is estimated at 1.5 million additional deaths in 1985-1995.

7. Goals for improvement in life expectancy have been adopted in two recent major international conferences: in 1994 by the International Conference on Population and Development and in 1995 by the World Summit for Social Development. The Programme of Action of the International Conference on Population and Development[1] stated that countries should aim to achieve by the year 2005 a life expectancy at birth greater than 70 years and by the year 2015 a life expectancy at birth greater than 75 years (para. 8.5). The Programme of Action of the World Summit for Social Development[2] adopted a goal of 60 years by the year 2000 (para. 36 (b)). Should the assumptions of the most recent United Nations population projections hold, 71 countries will not have reached the goal of 70 years by the year 2005 adopted by the International Conference on Population and Development and 111 will not have reached the Conference goal of 75 years by the year 2015.

II. Child survival and health

8. In 1990-1995, about 11 million children died annually before reaching age 5 and 8.2 million of them did not reach their first birthday. The vast majority of those deaths (98 per cent) occurred in developing countries, with the least developed countries accounting for a third of all deaths under age 5. In the developed world, only 11 out of every 1,000 newborn children died before they attained age 1 over the period 1990-1995; in the developing world, the number of deaths was 68 per 1,000 newborns. Infants in the least developed countries fared even worse, with 109 out of every 1,000 newly born dying before age 1. Similarly, mortality under age 5, a more sensitive indicator of socio-economic, environmental and behavioural factors than infant mortality, was 7 times higher in developing countries, and 12 times higher in least developed countries, than in developed countries. Estimates of infant and under-five mortality at the regional level are shown in table 1.

9. Recognizing the importance of reinforcing efforts to reduce mortality in childhood, the World Summit for Children and the International Conference on Population and Development have called for action to promote the survival and health of children and have set goals for the reduction of mortality. The Programme of Action of the International Conference on Population and Development establishes that all countries should aim to achieve an infant mortality below

Table 1
Infant mortality for 1970-1975 and 1990-1995, percentage change in infant mortality between those periods, and under-five mortality, 1990-1995, by major area or region ranked according to level of mortality

	Infant mortality (per 1,000 live births)		*Percentage change in infant mortality*	*Under-five mortality (per 1,000 live births)*
Major area or region	*1970-1975*	*1990-1995*	*1970-1975 to 1990-1995*	*1990-1995*
World	93	62	-33	82
More developed regions	21	11	-50	13
Less developed regions	104	68	-35	90
Least developed countries	147	109	-26	156
Northern America	18	9	-52	10
Europe	25	13	-48	16
Oceania	41	26	-36	33
Latin America and the Caribbean	80	40	-50	46
Asia	98	62	-37	77
Africa	130	94	-28	145

Source:
World Population Prospects: The 1996 Revision (United Nations publication, forthcoming), annex I.

35 per 1,000 live births and an under-five mortality below 45 per 1,000 by the year 2015 (para. 8.16).

10. Looking first at countries with high mortality — those whose most recent estimate of infant mortality since 1985 was at least 100 deaths per 1,000 live births or whose under-five mortality was at least 150 deaths per 1,000 — it is clear that they will have difficulty reaching the goals stipulated even if each country sustains from 1995 onwards a rate of decline equivalent to the highest one actually recorded by a member of the group (2.3 per cent per year). The group includes mostly countries characterized as least developed and has a heavy concentration of countries in Africa. The latter tend to be concentrated in Western Africa and in Eastern Africa. In Asia, countries belonging to this group are located mostly in the Indian subcontinent, and in Latin America and the Caribbean, the only country belonging to the group is Haiti.

11. Although it is estimated that infant and child mortality have declined consistently in all developing regions since 1970, the evidence suggests that the pace of decline may have begun to slow down during the 1980s, particularly among least developed countries. For many of the latter, the slowdown of the decline of mortality in childhood is associated with the growing prevalence of HIV infection. In countries where the level of HIV infection is significant, the task of reducing mortality in childhood has become more onerous and may depend not only on programmes aimed at combating the traditional infectious diseases of childhood but also on a concerted effort to prevent the further transmission of HIV.

12. It should be noted, however, that there are many developing countries where improvements in child survival over the past 20 years have been impressive. Those countries include some of the most populous in the world, such as China, India and Mexico, where the average annual rates of decline have exceeded 4 per cent per year. Of particular note are countries or areas that have experienced sustained rates of decline of above 7 per cent per year, including Chile, Jamaica and the Republic of Korea with respect to infant mortality, and the same three plus Costa Rica; Hong Kong, China; and Sri Lanka for under-five mortality. There are also a few developing countries, including Israel, the Republic

of Korea and Singapore, that have reached infant mortality levels comparable with those of developed countries (below 11 per 1,000).

13. A declining trend in infant mortality has also tended to characterize the countries with economies in transition. For the successor States of the former USSR, although the estimates show an apparent increase in infant mortality between 1970 and 1975, such a rise stems from improvements in the recording of neonatal deaths and does not reflect a change in underlying trends. Estimates since 1990 show annual fluctuations that sometimes imply an increase from one year to the next, but the overall trend is downward. Similar trends are observed in other countries with economies in transition. Thus, the data suggest that the social and economic transformations that countries with economies in transition are undergoing have not had a marked detrimental effect on the survivorship chances of children.

14. The developed countries with established market economies continue to exhibit very low levels of infant mortality, with Greece, Portugal and the United States of America setting an upper limit at 8 deaths per 1,000. The lowest level has been recorded by Sweden: 3 deaths per 1,000 in 1996.

15. In developed countries, mortality among infants and children is consistently higher among males than among females. This is not always the case in developing countries where the advantage that girls have over boys in terms of survival chances is sometimes outweighed by other factors, including discriminatory child-care practices favouring boys that lead to excess female mortality among children. Although only a small number of developing countries experience a clear-cut excess mortality among girls, the size of those countries implies that the impact is substantial. Thus, excess female mortality in childhood is estimated to result each year in 250,000 preventable deaths among girls under age 5.

16. Over the past two decades, the international community has mobilized around a strategic set of low-cost, high-impact actions aimed at reducing the preventable deaths of children. By the mid-1980s, universal child immunization became a major activity in many health programmes. Immunization and other child survival interventions helped to mobilize political support for child health and development and further draw attention to issues of capacity-building and of sustaining programmes, at national and community levels.

17. International efforts to improve child survival and development have been further strengthened in the 1990s, with national Governments, agencies of the United Nations system, non-governmental organizations, and bilateral and multilateral organizations working in close partnership. The World Summit for Children in 1990 was a significant milestone in respect of the acceleration of child survival and development interventions. In 1996, the report of the Secretary-General on progress at mid-decade on implementation of General Assembly resolution 45/217 on the World Summit for Children (A/51/256) indicated that significant progress had been made towards achieving the goals set for the year 2000. Despite the gains, however, childhood mortality remains unacceptably high in the developing world, particularly in sub-Saharan Africa and South Asia.

III. Primary health care and the health-care sector

18. Primary health care has contributed significantly to the gains in health status. Nevertheless, following the 1978 Declaration of Alma-Ata,[3] a long period elapsed before human and financial resources began to be reoriented towards primary health care. Decision-making in the health sector still favours curative clinical medicine over preventive and promotive public health. Public-health systems and services are underresourced, and care for the vulnerable groups, the disabled and the aged is on the whole poorly supported.

19. As regards human resources, while developed market economies have an estimated 750 nurses and midwives per 100,000 population and the economies in transition report an estimated 800, the least developed countries have only 20 per 100,000. On the positive side, the global demand for nursing and midwifery services is on the rise, and all regions of the World Health Organization (WHO) are reporting increased demand for support to the training of nurses and the development of human resources.

20. There is still a strong bias in many countries in favour of placing the central responsibility of patient care on physicians even though experience shows that nurses and other health workers can ably provide many of the same services just as well. More effort is needed to monitor the productivity of the health labour force, the quality of services offered and the cost.

21. WHO launched an initiative in 1996 aimed at addressing the broad issue of equity in health and health care. The initiative seeks to ensure that people's needs, rather than their social privileges, guide the distribution of

opportunities for well-being, and to reduce avoidable gaps in health status and health services between men and women and between groups with different levels of social privilege.

22. Interventions to address the problems of the elderly, the disabled and persons with HIV/AIDS are more effective at the community level. Similarly, the promotion of breastfeeding, advice on reproductive health, and education for mothers on infant and child care have a more direct impact when they come from known persons within each community than when they seem to be imposed by a central bureaucracy.

23. Access to essential drugs has increased greatly in absolute numbers over the 20 years since WHO adopted the essential drugs concept and produced the first essential drugs list. Many countries have adopted the essential drug concept as a way to rationalize the drug supply system. More than 120 countries regularly review their national list of essential drugs. Drug procurement and distribution in the public sector have been improved through the creation of autonomous central medical stores and through schemes such as the Bamako Initiative that include alternative financing methods such as cost-sharing. The rapid development of the private sector has contributed to the availability of drugs in most countries. Despite this progress, however, it is estimated that over one third of the world population still lacks regular access to essential drugs and that in some regions of the world, particularly the poorest countries of Africa and Asia, over 50 per cent of the population do not have access to essential drugs.

24. Many countries have expanded their drug regulatory capacity using norms and standards developed by WHO. Nevertheless, drug quality remains a concern, with substandard and counterfeit drugs becoming common in international commerce. The scarcity of human and financial resources exacerbated by government cutbacks undermines the ability of drug regulatory authorities to ensure that drugs on the market are safe, effective and of acceptable quality.

25. Lack of basic sanitation, safe water supply and food safety continues to contribute greatly to the prevalence of infectious diseases. While there has been an overall increase in the provision of clean water and sanitation, it has been inadequate to cope with population increases in many countries. It is estimated that in 1994, 75 per cent of the population in developing countries had access to safe water supplies and 34 per cent to sanitation coverage. In respect of both concerns, the rural population is worse off. In 1994, although sanitation coverage in rural areas was a mere 18 per cent, it was 63 per cent in urban areas. Similarly, access to safe water amounted to 70 per cent in rural areas in contrast with 82 per cent in urban areas.

26. There is a worldwide awareness of the need for health sector reform, although the methods adopted for this purpose vary considerably. The strategy for change in most countries emphasizes decentralization of responsibility to local levels, privatization of health-care services, and placing of greater emphasis on individual choice and responsibility for health-care costs. Decentralization may take several forms, but in all cases it has meant significant changes in health-care financing, training, supplies or levels of resources. The dearth of data, however, makes it extremely difficult to judge as yet how system performance has changed over time. A better flow of information would permit a more rational analysis of trends in a country's health status; the spread of information technology should facilitate this task in the future.

IV. Women's health and safe motherhood

27. Complications related to pregnancy and childbirth are among the leading causes of mortality for women of reproductive age in many parts of the developing world. Estimates of maternal mortality issued in 1996 indicate that around 585,000 women die each year of pregnancy-related causes, 99 per cent of them in developing countries (table 2). The gap in maternal mortality ratios between more developed and less developed regions is wide: in 1990, the figures ranged from more than 480 maternal deaths per 100,000 live births in the less developed regions to about 27 per 100,000 live births in the more developed regions. In parts of Africa, ratios can be as high as 1,000 per 100,000 live births.

28. The causes of maternal deaths are similar around the world. Globally, around 80 per cent of such deaths have direct causes, that is to say, obstetric complications of the pregnant state (pregnancy, labour and the puerperium), arising from interventions, omissions, incorrect treatment or a chain of events resulting from any of the above. The single most common direct cause of death — accounting for a quarter of all maternal deaths — is obstetric haemorrhage, generally occurring post-partum. Puerperal infections, often the consequence of poor hygiene during delivery or untreated reproductive tract infections (including those that are sexually transmitted), account for some 15 per cent of maternal mortality. Hypertensive disorders of pregnancy, particularly eclampsia (convulsions), result in some 13 per

Table 2.
Revised 1990 estimates of maternal mortality by region

	Maternal mortality ratio (maternal deaths per 100,00 live births)	*Number of maternal deaths (thousands)*
World total	430	585
More developed regions	27	4
Less developed regions	480	582
Africa	870	235
Asia[a]	390	323
Europe	36	3
Latin America and the Caribbean	190	23
Northern America	11	0.5
Oceania[b]	680	1

Source:
World Health Organization/United Nations Children's Fund, *Revised 1990 Estimates of Maternal Mortality* (Geneva, 1996).

[a] Excluding Japan which is included in more developed regions.

[b] Excluding Australia and New Zealand which are included in more developed regions.

cent of all maternal deaths. Around 7 per cent of maternal deaths occur as a result of prolonged or obstructed labour. Other direct causes of maternal deaths include ectopic and molar pregnancies, embolisms and consequences of interventions such as anaesthesia. About 20 per cent of maternal deaths have indirect causes, that is to say, they are the result of existing disease aggravated by the physiological effects of pregnancy. Of these indirect causes of death, anaemia is among the most significant.

29. A substantial proportion of maternal deaths, approximately 13 per cent, result from complications associated with unsafe abortion.[4] The Programme of Action of the International Conference on Population and Development has recognized unsafe abortion to be a major public-health issue and recommended that the recourse to abortion be reduced through expanded and improved family planning services. The Programme of Action goes on to stress that in circumstances where abortion is not against the law, such abortion should be safe. In all cases, women should have access to quality services for the management of complications arising from abortion. At present, approximately 90 per cent of the countries of the world, representing 96 per cent of the world population, have policies that under varying legal conditions, permit abortion to save a woman's life. However, a significant proportion of the abortions carried out are self-induced or otherwise unsafe, resulting in a large fraction of maternal deaths or permanent injury to the women involved.

30. The immediate cause of pregnancy-related complications, ill-health and death is inadequate care of the mother during pregnancy and delivery. More distal factors include women's subordinate status, poor health and inadequate nutrition. The age at which women begin or stop childbearing, the interval between each birth, the total number of lifetime pregnancies and the sociocultural and economic circumstances in which women live all influence maternal morbidity and mortality. However, the single most important proximate determinant of maternal health and survival is the extent to which women have access to and utilize high-quality maternal health care services. This was explicitly recognized in the Programme of Action of the International Conference on Population and Development (para. 8.22) which states: "All countries, with the support of all sections of the international community, must expand the provision of maternal health services in the context of primary health care. ... All births should be assisted by trained persons, preferably nurses and midwives, but at least by trained birth attendants."

31. Current global estimates by WHO show that, in the developing world, approximately 65 per cent of pregnant women receive at least some care during pregnancy; that 40 per cent of deliveries take place in health facilities; and that slightly more than half of all deliveries are assisted by skilled personnel. This contrasts sharply with developed countries where practically every woman receives regular care during pregnancy, delivery and the post-partum period.

32. Post-partum care has been a relatively neglected aspect of maternity care. Estimates based on the limited data available indicate coverage of post-partum care to be below 30 per cent for developing countries, the global estimate being 35 per cent. This low level of care is disturbing, since timely interventions during the post-partum period can prevent deaths both of mothers and of newborn infants, and can reduce the incidence of long-term pregnancy-related morbidities.

33. The most obvious impediment to use of maternal health care services is distance. In rural settings, where women have little access to resources to pay for transport

and where roads are likely to be poor and vehicles rare, the physical barriers involved render the use even of routine prenatal care services complicated and use of services for complications and emergencies is difficult.

34. As experience with implementing safe motherhood programmes has grown, it has become increasingly clear that the traditionally used indicator of maternal health status - the maternal mortality ratio - is not useful for monitoring progress in the short term. Most safe motherhood programmes now rely on process indicators for regular programme monitoring. Such process indicators can include the number and distribution of essential obstetric care services, the proportion of deliveries attended by skilled health-care providers or performed in institutional settings, the rates of operative delivery and institutional case-fatality rates. In addition, countries are urged to make maximum use of qualitative techniques to evaluate the quality of care provided, such as in-depth maternal audits and case reviews.

V. Human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS)

35. Over 30 million people worldwide were estimated to be living with HIV or AIDS at the end of 1997, around 1.1 million of whom were children (table 3). More than 90 per cent of cases are to be found in developing countries.

36. An estimated 5.8 million new HIV infections occurred during 1997, at an average rate of about 16,000 per day. Of these new infections, over 40 per cent were in women, and about 10 per cent were in children. HIV affects young adults disproportionately: in 1997, over a half of newly infected adults were under age 25. HIV-related disease caused the death of some 2.3 million people in 1997 — about one fifth of all those who have died since the beginning of the pandemic. Around 460,000 of these 2.3 million people who died were children.

37. HIV infection is not uniformly distributed geographically. In some areas, the experience has been one of widespread transmission since the early 1980s, while in others, the virus began to spread starting only around 1991 (see figure II). The global pandemic comprises a series of overlapping micro-epidemics, each with its own structure and dynamics. While a few relatively affluent countries have been able to arrest the growth of the epidemic within their boundaries, other parts of the world are experiencing the taking off of new and sometimes explosive epidemics. Virtually every part of the world is now affected by HIV.

Table 3
Estimated distribution of people living with HIV/AIDS, 1997

Region	*Number of adults and children currently living with HIV/AIDS (thousands)*	*HIV prevalence rate (percentage)*[a]
World total	30 612	
Sub-Saharan Africa	20 800	7.4
South and South-eastern Asia	6 000	0.6
East Asia and the Pacific	440	0.05
Caribbean	310	1.9
Latin America	1 300	0.5
Northern Africa and Western Asia	210	0.13
Northern America	860	0.6
Western Europe	530	0.3
Central and Eastern Europe/Central Asia	150	0.07
Australia and New Zealand	12	0.1

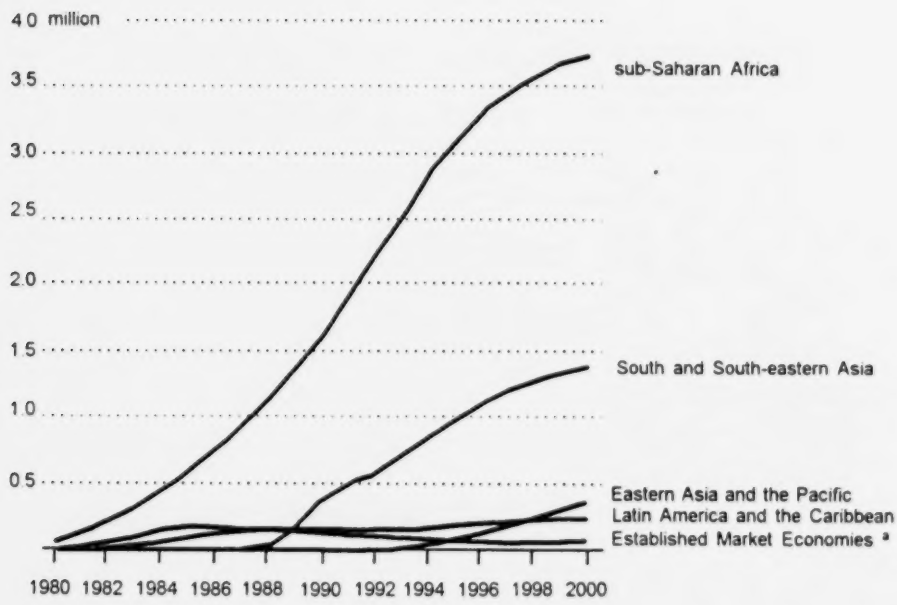
Source
World Health Organization/United Nations Joint and Co-Sponsored Programme on HIV/AIDS, *Report on the Global HIV/AIDS Epidemic* (Geneva, December 1997).

[a] Proportion of adults living with HIV/AIDS in the adult population aged 15-49 years.

38. It is estimated that around 21 million people were living with HIV in sub-Saharan Africa at the end of 1997 — about two thirds of the world's total. HIV began to spread in the early 1980s in countries of Eastern Africa. The epidemics whose origin is most recent — those in Botswana, Lesotho, Namibia, South Africa and Swaziland — have followed patterns of spread and intensity similar to those in the longest-established group.

39. The significant spread of HIV in parts of Asia began later than in Africa — from the mid-1980s onwards. In 10 years or less, prevalence rates have risen very rapidly in some areas. In addition to large variations between countries, there are also considerable intra-country differences in the dynamics of HIV transmission in Asia, notably in China and India.

Figure II. Annual number of new HIV infections
Selected regions



40. The best documented country in the region is Thailand. There, the epidemic took off in 1988, with an initial spread among injecting drug users. Prevalence in that group rose from zero to 35 per cent in the first nine months of the year. Similar rises among injecting drug users in Myanmar, and then in north-east India, followed within two years. Sexual transmission, however, has been the predominant mode in Asian countries.

41. The spread of HIV in Latin America began early, around 1980 — initially among homosexual and bisexual men, and injecting drug users. The most affected countries or areas in the region have been the Caribbean, Honduras and Brazil.

42. In Northern America, though the overall rate of increase in AIDS incidence has slowed in the past few years, there have been considerable variations in the populations affected. The increase in AIDS incidence in the 1990s has been greatest among women and economically disadvantaged populations, and for people infected through heterosexual contact as opposed to homosexual and non-sexual modes of transmission. Death rates from AIDS have fallen in the past few years, largely as a result of advances in therapy.

43. In Western Europe, AIDS incidence has stabilized in several countries in the north-western part of the continent in the past few years, while it continues to rise in countries of south-western Europe. In Spain and Portugal in particular, injecting drug use has contributed to the continuing spread of HIV.

44. In parts of Central and Eastern Europe, there are rapidly developing epidemics, fuelled by a variety of forces, including political and economic transition and its impact on lifestyles, expectations and health services. Large outbreaks of HIV infection related to injecting drug use have been reported in several countries — first in Poland and the former Yugoslavia in the late 1980s, and more recently in Ukrainian cities along the Black Sea coast. Injecting drug use now plays a significant part in the epidemic in the Russian Federation.

45. In Australia and New Zealand, over 85 per cent of infections are reported to have been acquired through sexual contact between men. There is evidence that HIV infection rates have reached a plateau in Australia and are declining in New Zealand.

46. HIV is transmitted exclusively through body fluids. Sexual transmission is estimated to account for over 85 per cent of all HIV infections worldwide. Transmission through blood and blood products is the second principal means of passing on HIV infection. Injecting drug use, where injectors share unsterilized needles or syringes, is a significant route in this connection in many places, both in developed and in developing countries.

47. The third principal means of infection is transmission from mother to child, both perinatal and post-partum. Mother-to-child transmission is the overwhelming source of HIV infection in children under age 15. Children can also be infected with HIV through blood transfusions and through the use of contaminated medical instruments.

48. While HIV infection is not curable at present, its course can be delayed significantly with combination antiretroviral therapy. Moreover, there is a range of treatments available to prevent and treat the opportunistic infections and malignancies that affect people whose immune system has been weakened by the virus. There is also prophylactic antiretroviral therapy, which seeks to reduce the likelihood of HIV infection's taking hold following exposure to the virus. The major problem in very many countries, however, is accessibility, given the overwhelming lack of availability and/or affordability of most forms of treatment.

49. Responses to HIV deal with prevention and care, and the two have become increasingly closely connected as the pandemic has progressed. Nearly all countries have made some response to the problems and threats that have accompanied the global spread of HIV infection. The response has often been directed by the health ministry, by the national AIDS programme or in some cases by national leaders. In many cases, the response has been strongest in the communities most affected by the virus — local community groups or associations of people living with HIV and AIDS.

50. As the overwhelming proportion of HIV infections occur through sexual acts or injecting of drugs, behaviour change is a prime response in terms of seeking to prevent transmission. One of the essential goals of prevention programmes is to identify populations engaging in sexual or needle-sharing risk behaviours and to provide them with a combination of the knowledge, skills, tools and supportive environment needed to change those behaviours and thus reduce their risk. Prevention programmes also need to focus on the broader issues that can affect the vulnerability of various populations to HIV/AIDS. Such longer-term actions include bringing about cultural and social changes, particularly with regard to the status of women, who in many societies are especially vulnerable to HIV/AIDS.

51. Given the vulnerability of young people to HIV and other sexually transmitted diseases, society needs to do more to help children protect themselves, by educating them in schools, at home and through the mass media, and giving them opportunities to develop skills to protect themselves. Educating children on AIDS while they are at school, even though they may be at no risk today, is an effective investment in their future.

52. There has been an increasing normalization of issues relating to HIV and AIDS as some parts of the world are approaching 20 years of facing the impact of the pandemic. In some countries, this normalization has taken the form of treating HIV like any another communicable disease. In others, there has been an expansion and redefinition of sexual and reproductive health services. The integration of HIV-related services into other forms of provision thus needs to be undertaken openly and in full consultation with the affected groups and communities; and those engaged in such an undertaking, while mindful of the benefits that integration can sometimes bring, should also be aware of the distinctiveness of the epidemic and of its impact on some of the most marginalized groups and communities.

VI. The epidemiological transition

53. The epidemiological transition, the shift from the predominance of infectious and parasitic diseases to that of chronic and degenerative diseases of adulthood as the main causes of death, is now under way in all regions of the world. Already by mid-century, non-communicable diseases, most notably circulatory diseases and cancer, had replaced infectious diseases as the most prevalent causes of death in developed countries. By the early 1990s, close to 90 per cent of all deaths in these areas had such causes.

54. Deaths from chronic and degenerative diseases are also emerging as an increasing proportion of all deaths in developing countries. As global child survival strategies have succeeded in reducing infant and child mortality from communicable diseases, the cause-of-death profiles in developing countries are changing. Declines in fertility in turn have led to a shift in the population age structure

towards an older population, which has also contributed to the increase in the proportion of all deaths due to chronic and degenerative diseases of adulthood, even as adult death rates have continued to decline. A larger proportion of the population is dying at older ages, where non-communicable diseases dominate the cause-of-death structure.

55. A comprehensive effort undertaken to provide estimates of cause-specific mortality by regions shows that in 1990 non-communicable diseases were responsible for close to 60 per cent of all deaths worldwide. Among these, cardiovascular diseases and malignant neoplasms were the two most important chronic disease groups among both men and women. Cardiovascular diseases caused approximately 14.3 million deaths worldwide in 1990, of which 63 per cent were estimated to have occurred in developing countries. Ischaemic heart disease was the leading cause of cardiovascular disease mortality, followed by cerebrovascular disease, in the world as a whole. Malignant neoplasms, in turn, were responsible for approximately 6 million deaths worldwide in 1990, of which 60 per cent were estimated to have occurred in developing countries. Among women, breast cancer was the most common form of cancer, followed by stomach cancer. In developing regions, cancer of the cervix uteri also posed an important threat to women's health. Among men, lung cancer was by far the most important cause of cancer mortality followed by stomach cancer.

56. Of the estimated 17.2 million communicable disease deaths in 1990, 96 per cent were estimated to have occurred in developing countries. Among communicable diseases, infectious and parasitic diseases were by far the most important causes of death in all regions for both sexes, except in established market economies, former socialist economies of Europe, and China. In these regions, respiratory infections played a relatively more important role. Maternal conditions were also important in determining mortality rankings by region among women of reproductive age.

57. It is estimated that deaths due to injuries made up 10 per cent of all deaths worldwide in 1990. The proportion of deaths due to injuries varied by region from a low of 6 per cent of all deaths in established market economies to a high of 12-13 per cent in Latin America and the Caribbean and sub-Saharan Africa. Eighty-four per cent of the 5.1 million estimated injury deaths worldwide occurred in developing countries.

58. Although noncommunicable diseases have been the most important causes of death in developed countries since mid-century, the relative contributions of various causes to all-cause mortality vary from place to place and reflect the distribution of behavioural and other risk factors for chronic diseases. Such differentials are evident in the regional differences in mortality by cause of death between established market economies and former socialist economies of Europe. In the latter, mortality tends to be higher from causes common in both regions. In addition, unintentional and intentional injuries make a larger contribution to overall mortality in former socialist economies of Europe than in established market economies. These differentials have been typically attributed to behavioural, lifestyle and environmental factors and medical care, with social-psychological factors being added to the list more recently.

59. Future gains in life expectancy in the developed countries, where the vast majority of deaths are recorded for individuals aged 65 years or over, will largely depend on future trends in mortality from chronic diseases at the oldest ages. Although forecasting the future is uncertain, recent evidence suggests that declines in old age mortality are likely to continue. In most developed countries, outside Eastern Europe, mortality at the oldest ages has declined since the 1960s. Further mortality declines also appear likely with changes in behaviour and advances in medical technology. In Eastern Europe, future gains in life expectancy will depend on the future course of mortality from chronic diseases not only at the oldest ages, but also at the middle ages, and from accidents and injuries in addition to chronic and degenerative diseases.

60. In developing countries, the course of the epidemiological transition has varied greatly from place to place. Of the regions and countries examined, the transition has progressed furthest in China, where communicable diseases accounted for only 16 per cent of all deaths in 1990. It is interesting to note, however, that the relative contributions of specific chronic diseases in China differ from those in Europe and Northern America. That cause-of-death patterns vary between low mortality Asian countries, including Japan, and the West is well known. Mortality from cerebrovascular diseases, particularly from haemorrhagic stroke, is, for example, far more common in Asian countries than in the West, while ischaemic heart disease plays a more important role in cardiovascular disease mortality in Western than in Asian countries. In the Chinese case, chronic obstructive pulmonary disease and liver cancer also stand out as important causes of chronic disease mortality. Such differentials illustrate that mortality from non-communicable diseases can vary substantially from place to place reflecting differentials in risk-factor profiles among countries and regions.

61. In other developing countries, the epidemiological transition is not as far along as in China or in developed countries. Although non-communicable diseases now make up a higher proportion of all deaths than communicable diseases in Latin America and the Caribbean, Northern Africa, South-central and Western Asia, other Asia and the Pacific islands, communicable diseases still account for a third or more of all deaths in these areas. Communicable diseases are particularly important in India and sub-Saharan Africa, where over half of all deaths are attributed to communicable diseases. The most important communicable diseases in developing countries include diarrhoeal diseases, lower respiratory infections, perinatal disorders and tuberculosis. In addition to these, measles and tetanus appear among the 10 leading causes of death in India, Northern Africa, South-central and Western Asia, and measles, malaria and HIV in sub-Saharan Africa. What is perhaps most disturbing about the findings presented here is that many of these diseases are either preventable or curable with modern medical technology.

62. The growth in chronic-disease mortality alongside the continued burden from communicable diseases has meant that many developing-country Governments are now faced with increasing pressure to shift scarce health resources away from the prevention and treatment of childhood infectious diseases to the treatment of chronic and degenerative diseases of adulthood. How Governments respond to these pressures is likely to have important distributional consequences in the allocation of health resources. Within countries, the epidemiological transition appears to have occurred along socio-economic lines: chronic and degenerative diseases of adulthood have a growing prevalence among the better off, while communicable diseases remain relatively more prevalent among the poor. A shift away from the prevention and treatment of childhood infectious diseases could also have long-term consequences for the development of chronic diseases in adulthood, many of which (for example, rheumatic heart disease, stomach cancer and respiratory diseases) have infectious origins. Given the diversity in the pace of the epidemiological transition among regions, and among countries within regions, it is becoming increasingly important to design health-care policies based on knowledge of local circumstances, and to consider the short- and long-term implications of shifts in the allocation of health-care resources between the prevention and treatment of communicable and non-communicable diseases.

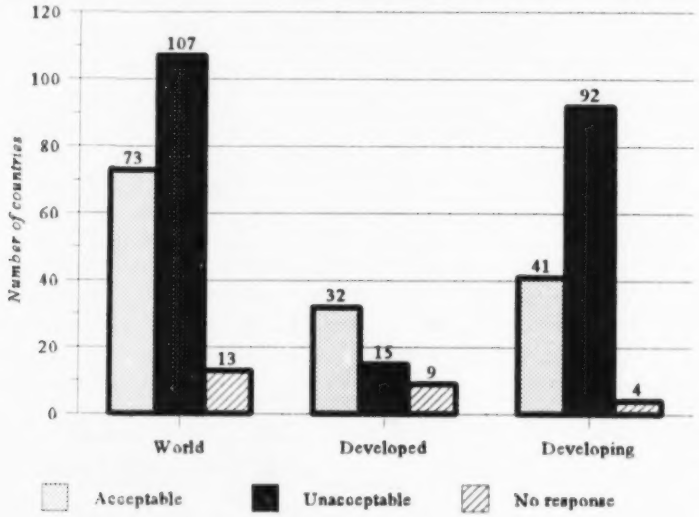
VII. Health and mortality policies

63. The pursuit of health is central to the achievement of all social and economic goals by individuals, families, communities and societies. The primary health-care approach has provided a blueprint for the formulation of health policies at both the national and the international level. Since the International Conference on Primary Health Care held in Alma-Ata in 1978 which provided an impetus to the primary health-care movement, virtually all countries in the world have adopted "Health for All" strategies. Health for All has also been instrumental in putting health at the centre of the development agenda. In keeping with this approach, the Programme of Action of the International Conference on Population and Development reaffirmed that increasing access to primary health care and health promotion constitute central strategies for reducing mortality and morbidity.

64. Despite the considerable progress made in increasing life expectancy worldwide, in reality there is no acceptable level of mortality, and no Government considers the levels of mortality in a country to be fully satisfactory. However, Governments characterize levels of mortality as "acceptable", given the level of medical technology and the resources available for reducing mortality. As of 1995, 73 countries worldwide viewed their mortality levels to be acceptable and 107 countries considered them to be unacceptable. Not surprisingly, 86 per cent of the countries that regarded their mortality levels as unacceptable were developing countries (figure III).

65. The level of mortality achieved in a country influences not only government perceptions but also the types of health concerns expressed by the Government. In the developing countries, infant and child survival and maternal mortality are the principal concerns of Governments. More than half of the developing countries and about two thirds of the least developed countries mentioned infant mortality as a major concern (table 4). Approximately one fifth of the developing countries and slightly less than one third of the least developed countries viewed the level of mortality of mothers or pregnant women, as well as that of women of reproductive age, with concern. Among the 53 African countries, 38 countries expressed concerns about the level of infant mortality and 30 countries about the level of child mortality. Eighteen African countries indicated serious concern for the level of mortality of mothers or pregnant women and 17 for that of women of reproductive age. Out of a total of 46 Asian countries, 18 countries expressed concern about their level of infant mortality and 7 countries about their level of child

Figure III. Governments' views regarding acceptability of mortality levels, 1995



Source: Population Policy Data Bank maintained by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat.

Table 4
Population groups whose mortality levels are of particular concern to Governments

		Population group					
Major area and region	*Total number of countries*	*Infants*	*Children especially under age 5*	*Mothers and or pregnant women*	*Women of reproductive age*	*Males*	*Other*
World	193	84	57	29	30	17	29
More developed regions	56	14	7	0	2	14	12
Less developed regions	137	70	50	29	28	3	17
Least developed countries	48	31	23	15	14	0	3
Africa	53	38	30	18	17	0	4
Asia	46	18	7	7	6	2	6
Europe	43	9	5	0	1	12	8
Latin America and the Caribbean	33	15	13	3	6	2	7
Northern America	2	1	1	0	0	1	2
Oceania	16	3	1	1	0	0	2

Source:
Population Policy Data Bank maintained by the Population Division of Economic and Social Affairs of the United Nations Secretariat.

mortality. Among the 33 countries of Latin America and the Caribbean, corresponding figures were 15 countries and 13 countries, respectively. Only seven countries in Asia expressed concern for the level of mortality of mothers or pregnant women and six countries for that of women of reproductive age. In Latin America and the Caribbean, the level of mortality of mothers or pregnant women was viewed with concern by three countries and that of women of reproductive age by six countries. Nine developing countries also expressed a particular concern about the level of mortality of their rural population.

66. In the more developed regions of the world, the level of mortality of adult men as a whole or adult men in specific age groups was one of the major concerns and was mentioned by 14 countries. High and/or increasing mortality among adult men was viewed as an issue of particular concern by five countries of Eastern Europe. Following the deterioration of the health situation in Eastern Europe that occurred during the first half of the 1990s, nine countries also expressed concern for their level of infant mortality and five countries for their level of child mortality.

67. Health-care reforms dominate the debate on health policies in both developing and developed countries. Despite significant progress made in the implementation of primary health care in developing countries, in particular the notable success of immunization programmes, there has been growing concern that large and increasing numbers of people belonging to the poorer socio-economic groups or people living in rural areas have little or no access to basic health care. Although universal access to basic health services is a core principle of the primary health-care approach, very few countries have adopted equity-based health policies and strategies. In the large majority of low-income countries, the bulk of the limited public funds allocated to the health sector are absorbed by the hospital system, leaving little resources for the primary-level health-care system which deals with the basic and essential health needs of the entire population. In a context of economic difficulties and growing liberalization, the operation of this system has led to rapidly rising costs while becoming increasingly inefficient and inequitable.

68. In the developed countries, the debate on health-care reform has been driven largely by economic considerations. An idea common to reform proposals is that substantial reduction in costs can be achieved through greater efficiency and effectiveness in the provision of services. Central to these reform proposals is a redefinition of the function of health funding agencies, whether public authorities or private insurers, in terms of a shift from their performing simply a funding role towards their serving as active purchasing agents of health care. Enabling competition between health providers is another major component of the new approaches to health service delivery. The strong economic focus of much of health-care reform has given rise to a number of concerns with regard to the implication of these reforms. There is, so far, no clear relationship between managerial innovation and health gains. It has been stressed also that the formulation, adoption and implementation of a health policy, probably more than any other type of policy, are the outcome of a social and political process in which it is essential that all actors be represented. In addition, there is evidence that the responsibility for taking actions that can have a major influence on health increasingly rests with subnational authorities such as city governments and local communities.

VIII. Activities of intergovernmental and non-governmental organizations

69. Non-governmental organizations have had a long and historic role in improving human health and welfare. They have shown themselves to be important complements to Governments and international organizations, often being able to service populations and areas that are hard to reach through government channels. Non-governmental organizations are also increasingly active in contributing to the achievement of the objectives of the Programme of Action of the International Conference on Population and Development. In the area of health and mortality, their extensive efforts have encompassed the full spectrum of activities for enhancing the length and quality of life — development education, health promotion, provision of services, continuing education for professionals, scientific research, publications, and the like.

70. The number of non-governmental organizations working in health and health-related fields is large and increasing steadily. Those organizations work at local levels, at national levels and at the international level. According to a survey undertaken by the Organisation for Economic Cooperation and Development (OECD) in the early 1990s of over 1,000 non-governmental organizations from member countries, 752 worked in the domain of population and development, 85 per cent of those being in health. They worked in over 50 countries in Africa, over 35 in Asia and the Pacific and over 29 in Latin America and the Caribbean. Of the various actions included in this field, maternal and child health activities were carried out in most countries and primary health-care actions were carried out the most

frequently (65 per cent). Many of the non-governmental organizations from the OECD member countries were providing support to and cooperating closely with their southern counterparts. They provided not only financial support, but also technical and information exchange which has long-lasting benefits.

71. Many non-governmental organizations focus on improving scientific understanding of selected diseases associated with high mortality. Their scientific work attests an important and fruitful role that non-governmental organizations have played in improving health and reducing mortality. The International Union Against Tuberculosis and Lung Disease (IUATLD), for example, has been a leader among non-governmental organizations in the search for effective and efficient treatments against tuberculosis, one of the most prevalent among infectious diseases, particularly in developing countries. One third of the world population is now infected with the *mycobacterium tuberculosis bacillus*, the causative agent of tuberculosis. The constituent members of IUATLD collect and disseminate knowledge on all aspects of tuberculosis and lung disease as well as problems of community health through conferences, research and publications, and undertake activities at the national level. An example of the Union's contribution to the control of tuberculosis was its pioneering work done in the development of DOTS (directly observed treatment, short-course), a treatment strategy that WHO has since called on the world's medical and political leaders to use in order to control the global tuberculosis epidemic. IUATLD therefore provides an important illustration of how the activities of a non-governmental organization can lead to the development of health strategies and health treatments that save lives.

72. Two non-governmental organizations, the International Society and Federation of Cardiology (ISFC) and the World Hypertension League (WHL), combine the scientific study of circulatory diseases with significant health promotion activities. Circulatory diseases such as heart attacks and stroke kill more people than any other disease. ISFC is composed of national cardiac societies and heart foundations in over 80 countries, as well as individual members. WHL is composed of national associations in over 60 countries. The importance of these non-governmental organizations in the role of information exchange among nations for health promotion can be well illustrated by one example. A key Irish Heart Foundation health message states that lack of adequate physical exercise is one of four main risk factors for heart disease. In 1996, the Irish Heart Foundation, supported by numerous local associations and authorities, launched an exercise incentive scheme that used a system of attractive pole signs and footpath markings at intervals of one kilometre to encourage people of all ages to take exercise for leisure and good health. The spreading of knowledge of this health promotion idea through these non-governmental organizations led to the embracing of the programme by Finland, Denmark, Sweden, Germany and Northern Ireland in collaboration with the relevant heart foundations. This, then, is another example of how activities of non-governmental organizations have supported healthier lifestyles.

73. Community-based organizations have had an increasingly visible and important role in providing health services in both developing and developed countries. These organizations, and other bodies such as women's and farmers' groups, may be considered health development structures which constitute one of three main interrelated components of a district health system. Health development structures undertake a wide range of activities. For example, they have mobilized local people for health-care activities and, where resources were available, contributed directly to health service delivery. In more general terms, health development structures have had an educational function in terms of the population they represented.

74. Almost all of the 4,000 or so health districts in the African Region of WHO have health committees. While some of the health development structures were established by Governments, others were established through an evolutionary process whereby a particular community-based organization developed over time, often without any explicitly stated health development function. For example, one organization was formed by the headmaster of a local school after a hurricane disaster.

75. Community-based organizations are outside the formal government structures and are therefore often invisible to the formal health sector. This means that, to a large extent, they are an underutilized resource. In many health districts the numbers of these organizations can be quite considerable. For example, both Nigeria and Senegal documented around 500 within the district health areas studied by WHO, and other countries similarly reported on the existence of a significant number. An important finding of the study related to the issue of equity. In many areas where the formal health sector was absent, health development structures were the basic source of health services. In addition, the monitoring function carried out by health development structures in respect of the performance of district health services and of lobbying for their greater effectiveness led to greater equity in the distribution of services (for example, in Nigeria and Jamaica).

76. Non-governmental organizations, including community-based organizations, continue to play an essential role in areas of scientific research, health treatment and health promotion. They provide services; they educate health professionals, lay persons and families; they undertake and spread the results of research and successful treatment and prevention techniques. As emphasized in the Programme of Action of the International Conference on Population and Development, a broad and effective partnership is essential between Governments and non-governmental organizations at the local, national and international levels. Increasing efforts to further strengthen non-governmental organizations and to further develop links among these organizations as well as with Governments at all levels are timely and will benefit many in both developing and developed countries.

IX. Health and development

77. Sparked by a host of global health threats — including malaria, emerging and re-emerging diseases (HIV/AIDS, tuberculosis, Ebola fever), the rising incidence of cancer and other chronic diseases, recent instances of increasing mortality, mounting medical care costs, the intractability of poverty, armed conflict and environmental degradation — issues of health and development are undergoing renewed scrutiny. Since the 1960s, the concept of development has evolved from a narrowly focused economic viewpoint to one stressing the social aspects and environmental sustainability of development. The quest to better integrate economic and social factors into development has given impetus to a strategy emphasizing health, family planning, nutrition, education, safe drinking water, sanitation, shelter, poverty eradication and sustainable economic growth.

78. Cross-national statistical analyses have found that only one third of improvements in survivorship between 1930 and 1960 were attributable to socio-economic factors, that is to say, income, literacy and nutrition. The remaining two thirds were due to other factors, such as anti-malarial programmes, immunization campaigns and promotion of personal health. For the period 1965-1969 to 1975-1979, income, literacy and nutrition were the dominant factors in explaining mortality declines and it was suggested that the reduced effects of other factors could be attributable to a slackening in investments in health programmes in the more recent period.

79. Income is an important health determinant, as it allows greater access to food, housing and health care. Life expectancy, which continues to be associated with per capita income, rises rapidly with income at low income levels, particularly when per capita income is within the $2,000 to $3,999 range (1994 purchasing power dollars), and then tapers off at higher income levels, suggesting that income growth has its greatest impact on the health of very poor populations. It is clear, however, that health depends on more than income. Because poverty has a powerful influence on health, not only is average per capita income relevant, but the numbers of people living in absolute poverty and the distribution of income (relative poverty) are also important. Poverty is characterized by deprivation of food, safe drinking water, sanitation, medical care, shelter, education and information.

80. Despite constraints imposed by low income, some developing countries have achieved low mortality. In China, Cuba, Costa Rica, the State of Kerala in India, Jamaica and Sri Lanka, life expectancy approximates that of developed countries, showing that health can be achievable when political commitment is translated into wide access to basic health services, education and food. In developing countries, mother's education is a crucial determinant of child survival. The fact that many channels of transmission are probably operating, accounts for the variety of national experiences in achieving improved health.

81. In recent years, focus has shifted from examining the long-term impact of economic changes on health towards assessing the consequences of shorter-term macroeconomic fluctuations. Interest has concentrated on the impact of structural adjustment on developing countries, the repercussions of economic reform for countries with economies in transition, and the consequences of economic stagnation in developed market economies. In the 1980s, a severe economic downturn in some developing countries led to the imposition of structural adjustment programmes. This was felt to have contributed to an erosion of health conditions, as countries pared government expenditures. Given that few tools exist to gauge the impact of adjustment on health, it is difficult to establish a link between cause and effect. It may, however, be unrealistic to expect an immediate impact on mortality: one may appear in subsequent mortality trends.

82. The reconfiguration of the [illegible] into successor States and the momentous political, economic and social changes that swept across Eastern Europe have been accompanied by deteriorating health conditions. Many of these countries have experienced stagnating or increasing mortality rates. A number of explanations have been offered, including ineffective and inefficient health services, catch-up effects from previous lifestyle risks, economic impoverishment, widening social inequality, the breakdown of political

institutions, and high alcohol consumption combined with binge drinking.

83. Among developed market economies, the potential detrimental impact of the prolonged economic downturn on morbidity and mortality has been examined. With the persistence of high unemployment in Western Europe, research has looked at the impact of protracted unemployment on mortality. The data have not confirmed an association between unemployment and premature death. Paradoxically, mortality improvements in Finland have been faster during the current economic downturn than prior to it. Moreover, there is no conclusive evidence that unemployment contributes to unhealthy lifestyles. However, unemployment does appear to have a detrimental impact on mental health.

84. A key intersection of health and development concerns has been the environment. Safe drinking water, sanitation, pollution, deforestation, desertification, depletion of the ozone layer and climatic change are major determinants of health. Least developed countries are most at risk from traditional health hazards, including lack of safe water and sanitation, poor housing and shelter, unsafe food and high prevalence of disease vectors. Developing countries undergoing rapid industrialization are at risk from traditional as well as modern hazards such as pollution, hazardous waste, unsafe pesticides and other chemicals, workplace hazards and traffic accidents. A further threat is the potentially deleterious impact of global climate changes, including changes in the distribution of infectious and vector-borne diseases due to temperature changes. Poor environmental quality is linked to diarrhoeal diseases, respiratory infections and a variety of parasitic diseases, as well as cardiovascular diseases and cancer.

85. The negative consequences of ill health are difficult to ascertain because households can adopt coping strategies, such as compensating for the lost labour of sick individuals, which reduce the costs of poor health. Nevertheless, ill health in some instances has been found to impact negatively on household consumption and investment. In West African households afflicted by onchocerciasis (river blindness), assets were used to finance medical care, while in Thailand, 60 per cent of involuntary land sales were due to ill health. Attempts to establish an association between health and productivity at the individual level have had more success. In Kenya and India, there is evidence linking nutrition, health and agricultural productivity. Nutritional status of children is also an important factor for school performance. In Brazil, health was found to influence wages.

86. Diseases and epidemics that range across large swaths of territory can have significant impacts on development. Onchocerciasis control in Africa opened up vast new tracts to agriculture. The control of malaria and other endemic diseases has contributed to food and crop production in areas formerly blighted by mosquito infestation. It has been estimated that Peru lost US$ 500 million, as a result of cholera that raged across the country in 1991. Through its effects on national savings and productivity, HIV/AIDS threatens economic growth. The impact is significant because victims are often educated and skilled adults in their prime working years. Second, because of high treatment costs for HIV/AIDS — US$ 1,000-US 1,500 a month per patient — resources are being diverted from other activities.

87. Recent decades have witnessed momentous changes in health and development. As a result, a new perspective has emerged that positions health at the heart of development. Health and low mortality are not merely intermediate objectives or milestones on the path to socio-economic development. Indeed, good health and long life are increasingly recognized as being goals in themselves as well as belonging among the fundamental pillars of development.

Notes

[1] *Report of the International Conference on Population and Development, Cairo, 5-13 September 1994* (United Nations publication, Sales No. E.95.XIII.18), chap. I, resolution 1, annex.

[2] *Report of the World Summit for Social Development, Copenhagen, 6-12 March 1995* (United Nations publication, Sales No. E.96.IV.8), chap. I, resolution 1, annex II.

[3] *Alma-Ata 1978: Primary Health Care. Report of the International Conference on Primary Health Care, Alma Ata, Union of Soviet Socialist Republics, 6-12 September 1978*, "Health for All" Series, No. 1 (Geneva, WHO, 1978), reprinted 1983.

[4] Unsafe abortion is defined as a procedure for terminating an unwanted pregnancy that is performed by persons lacking the necessary skills and/or in an environment lacking the minimal medical standards (based on World Health Organization, "The prevention and management of unsafe abortion", report of a Technical Working Group, Geneva, April 1992 (WHO/MSM/92.5)).